

## **REMARKS/ARGUMENTS**

Claims 1, 2, 6-15, 19-21, 24, and 27-40 were previously pending in the application. Claims 41-44 are added herein. Assuming the entry of this amendment, claims 1, 2, 6-15, 19-21, 24, and 27-44 are now pending in the application. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks.

### **Allowable Subject Matter**

On page 16 of the office action, the Examiner stated that claims 33 and 40 are allowed and claims 9-11 and 37-39 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Prior-Art Rejections**

In pages 2-10, the Examiner rejected claims 1, 2, 6, 8, 14, 15, 19, 21, 24, 27-32, and 34-36 under 35 U.S.C. 102(e) as being anticipated by Grover (U.S. Patent No. 6,856,592 B2 to Grover et al.). In pages 10-12, the Examiner rejected claims 7 and 20 under 35 U.S.C. 103(a) as unpatentable over Grover in view of Cisco (Cisco's Packet over SONET/SDH (POS) Technology Support). In pages 12-14, the Examiner rejected claims 12 and 13 under 35 U.S.C. 103(a) as unpatentable over Grover in view of Mo (U.S. Patent App. No. 2003/0037276 A1 to Mo et al.). In pages 14-16, the Examiner rejected claims 21, 24, 31, and 32 under 35 U.S.C. 103(a) as unpatentable over Grover in view of Stamatelakis (U.S. Pat. App. Pub. No. 2003/0048749 to Stamatelakis et al.).

### **Interview with the Examiner**

On February 26, 2008, the Applicant's below-named attorney had a telephonic interview with the Examiner to obtain clarification on the stated grounds for the rejections of claims 1 and 35.

### **Claim 1**

The Examiner argues that Grover teaches all the claimed features of claim 1, including "receiving . . . a primary path vector having a plurality of entries corresponding to the nodes and links in the network," wherein "each entry of the primary path vector identifies whether the corresponding node or link is part of the primary path for the service, wherein at least one entry of the primary path vector identifies that the corresponding node or link is not part of the primary path for the service." In support, the Examiner cites column 4, line 63 - column 5, line 5;

column 6, lines 36-50; column 10, lines 14-26; and column 5, lines 4-11 and 36-43, of Grover. The Applicant respectfully submits, however, that Grover does not teach these claimed features.

In particular, the Examiner argues that column 4, line 63 - column 5, line 5, of Grover teaches “receiving a service data structure comprising an identification of each link and transit node in a primary path for the service.” The Applicant, submits, however, that neither the cited section, nor any other section of Grover, teaches receiving a data structure, let alone a data structure comprising an identification of each link and transit node in a primary path for the service. Instead, the cited section recites the steps of establishing a model describing the network and determining working capacity placements on spans. No mention is made of receiving, sending, or transmitting a data structure. Thus, it cannot be said that Grover teaches this requisite feature of claim 1.

Furthermore, the Examiner argues that column 5, lines 4-11, of Grover teaches a primary path vector wherein “at least one entry . . . identifies that the corresponding node or link is not part of the primary path for the service.” In particular, as clarified in the 2/26/2008 Interview, the Examiner argues that Grover teaches determining the working capacity of each span in a network and then generating a “whole” set, or superset, of all possible restoration paths in the network and then selecting a subset of “eligible” restoration paths; thereby, implicitly identifying “non-eligible” restoration paths. The Applicant respectfully submits that Grover teaches nothing of the sort, and that, even if Grover did teach such a process, which the Applicant does not admit, it would not disclose the claimed feature.

The cited section of Grover refers to step 120 that, as stated in Fig. 2, is to “generate a set of eligible restoration routes for each span in the network.” Grover at col. 6, line 63-col. 7, line 9, provides further details on step 120, explaining (emphasis added):

In the step (120) of generating a set of eligible restoration routes for each span failure, a set of restoration routes was generated such that there were at least 20 eligible restoration routes for each span failure. The set for each span includes all restoration routes up to a particular hop limit. In the main, the restoration routes selected as a result of the bi-criteria (LP/IP) approach had significantly less hops than the maximum hop limit used. Over all, single-span failure scenarios produced a sample size of 4022 individual eligible restoration routes. These routes are too numerous to include herein, and at any rate, depend on the topology of the network and the maximum hop limit used. The generation of restoration routes under the constraint of hop limits is well known in the art.

As can be seen, Grover teaches that the generated set of eligible restoration routes for a span is the set of all restoration routes for the span, up to a particular hop limit. Grover does not anywhere mention any “non-eligible” routes, nor does Grover teach generating a “whole” set, or superset, of restoration routes from which the eligible restoration routes are selected. The only way Grover might teach such a superset would be to generate a superset of restoration routes with a hop limit higher than the “particular hop limit” and then eliminate the restoration routes having more hops than the “particular hop limit.” Such a process makes no sense and Grover teaches away from such a process by teaching using the particular hop limit. If anything, Grover’s set of eligible restoration routes, which the Examiner characterizes as a subset, is used as a superset.

Assuming, *arguendo*, that Grover does teach selecting a subset of eligible restoration routes from a superset of restoration routes, which the Applicant does not admit, such a teaching would bear no correlation to the claimed feature. The Applicant respectfully submits that neither a set of restoration routes nor any set of network routes is equivalent to a vector representing a primary path, wherein each entry identifies whether a corresponding node or link is part of the primary path and at least one entry identifies that the corresponding node or link is not part of the primary path. It should also be noted that, in order for a primary path vector to identify any primary path, it must also have at least one entry identifying at a minimum one link that is part of the primary path. Therefore, it cannot be said that Grover teaches this claimed feature of claim 1.

The Applicant submits, therefore, that claim 1 is allowable over Grover. For similar reasons, the Applicant submits that claims 14, 21, and 35 are also allowable over Grover. Since claims 2, 6-13, 27-28, 34, and 41 depend variously from claim 1, claims 15, 19, 20, 29, 30, and 42 depend variously from claim 14, and claims 36-39 and 44 depend variously from claim 35, it is further submitted that those claims are also allowable.

#### Claim 8

The Examiner argues that Grover teaches all the required features of claim 8, including “a network data structure comprising, for each link in the network and each node or other link in the network, a representation of a minimum amount of protection bandwidth required to be reserved on said each link to restore service upon failure of said node or other link.” In support,

the Examiner cites col. 9, lines 22-41, of Grover as particularly teaching this feature. The Applicant respectfully submits that Grover does not teach this claimed feature.

The claimed feature is a data structure that can be represented as a table whose one axis includes “each link in the network,” whose second axis includes “each node or other link in the network,” and whose entries are representations “of a minimum amount of protection bandwidth required to be reserved on said each link [of the first axis] to restore service upon failure of said node or other link” of the second axis. Thus, each entry represents a relationship between a link and either a node or another link in the network. The cited section of Grover, however, teaches representing a relationship between a link and a restoration route. Thus, it cannot be said that Grover teaches the recited feature.

The Applicant submits that this provides further grounds for the allowability of claim 8. For similar reasons, the Applicant further submits that this provides further grounds for the allowability of claim 36. Since claims 9-11 depend variously from claim 8 and claims 37-39 depend variously from claim 36, it is further submitted that this provides further grounds for the allowability of those claims.

#### Claim 21

The Examiner argues that it would have been obvious to combine the teachings of Grover and Stamatelakis and that the combination discloses all of the claimed features of claim 21. In particular, the Examiner argues that it would have been obvious to combine the references “because the preconfigured paths contribute to the flexibility to the restoration of the network.” The Applicant respectfully submits, however, that it would not have made sense to combine the cited teachings of the references.

Grover teaches a method for performing various calculations to provide a set of restoration routes for individual span failures in a network (see Grover Abstract). The steps taught by Grover are performed in order to determine a set of restoration routes for a span failure. Once a restoration route has been determined for a particular span failure, as allegedly taught by Stamatelakis, there is no reason to perform the steps taught by Grover. It would make no sense for Grover to teach performing operations on the end-products of those very operations since such operations would have to be meaningless in order to result in those very end-products on which they operate. Thus, it cannot be said that it would have been obvious to combine the teachings of Grover and Stamatelakis. Furthermore, since such a combination with Stamatelakis

destroys the purpose or function of the invention disclosed in Grover, then a person of ordinary skill in the art would not have found a reason to make the suggested combination. *See, e.g., In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

The Applicant submits, therefore, that claim 21 is allowable over the cited references. Since claims 24, 31-32, and 43 depend from claim 21, it is further submitted that those claims are also allowable over the cited references.

#### Claim 35

In the 2/26/2008 Interview, the Examiner explained that claim 35 was rejected based on the assumption that claim 35 is identical to a previously rejected version of claim 1. However, as admitted, the Examiner overlooked important changes previously discussed. In particular, claim 35 claims that “the service data structure is a primary path vector having a plurality of entries corresponding to all the nodes and links in the network” and that “each entry of the primary path vector identifies whether the corresponding node or link is or is not part of the primary path for the service.”

As stated above, the Applicant respectfully submits that claim 35 is allowable for reasons similar to those provided regarding claim 1. Since claims 36-39 and 44 depend variously from claim 35, it is further submitted that those claims are also allowable.

#### Claims 41-44

New claims 41-44 recite that “at least one entry of the primary path vector identifies that the corresponding link is part of the primary path for the service.” New claims 41-44 are supported by the specification at page 22, lines 4-31, and Fig. 9. The Applicant submits that, since none of the cited references teach the claimed feature, this provides further grounds for the allowability of claims 41-44.

#### Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to Mendelsohn & Associates, P.C. Deposit Account No. 50-0782.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission,

as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

In view of the above amendments and remarks, the Applicant believes that the now-pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

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